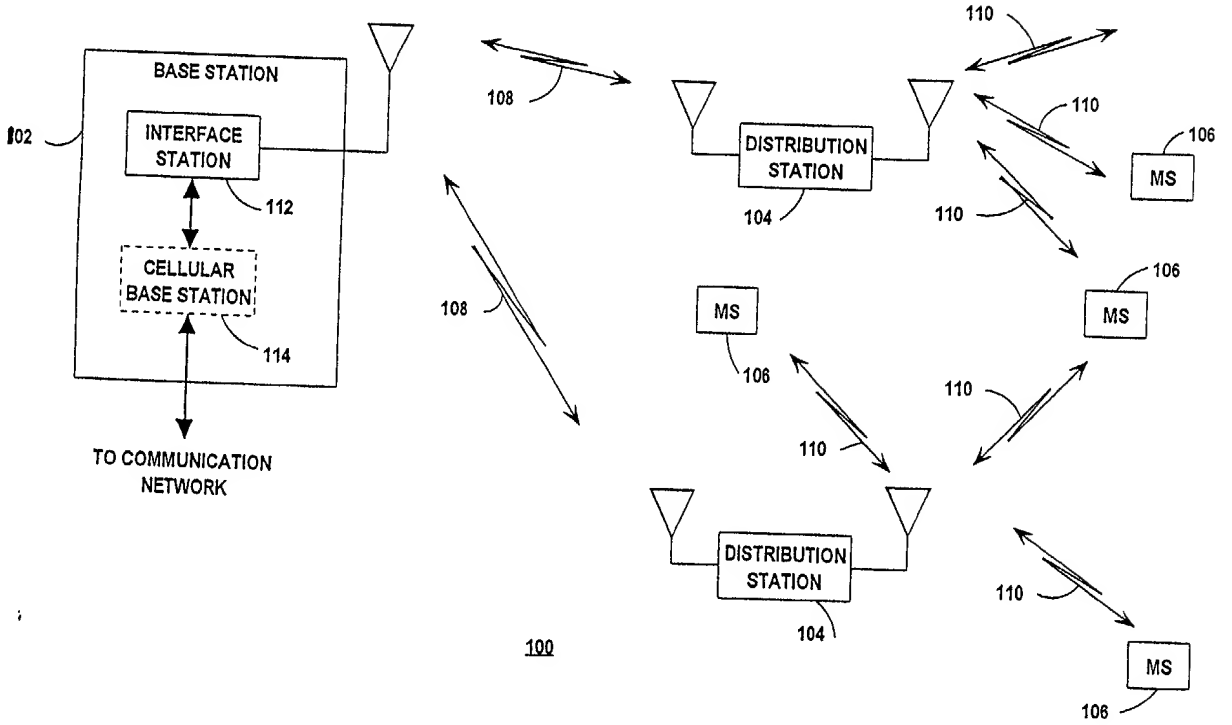
BASE STATION
102
INTERFACE STATION
112
CELLULAR BASE STATION
114
TO COMMUNICATION NETWORK
108
108
DISTRIBUTION STATION
104
DISTRIBUTION STATION
104
110
110
110
110
110
110
110
MS
106
MS
106
MS
106
MS
106
100

FIGURE 1

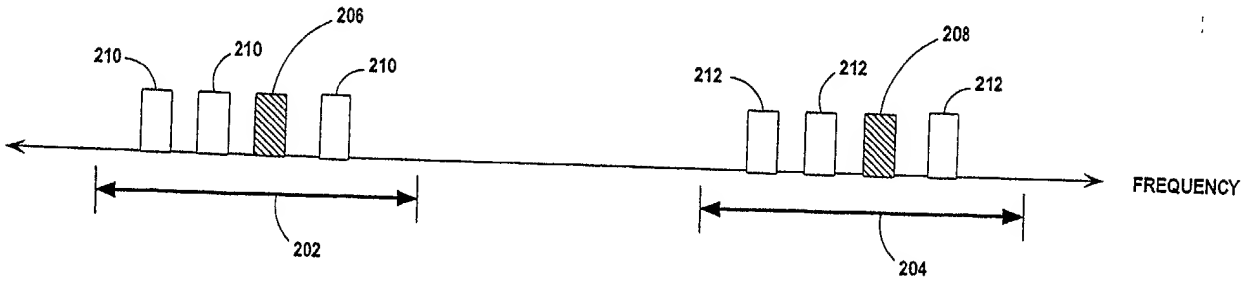

FIGURE 2

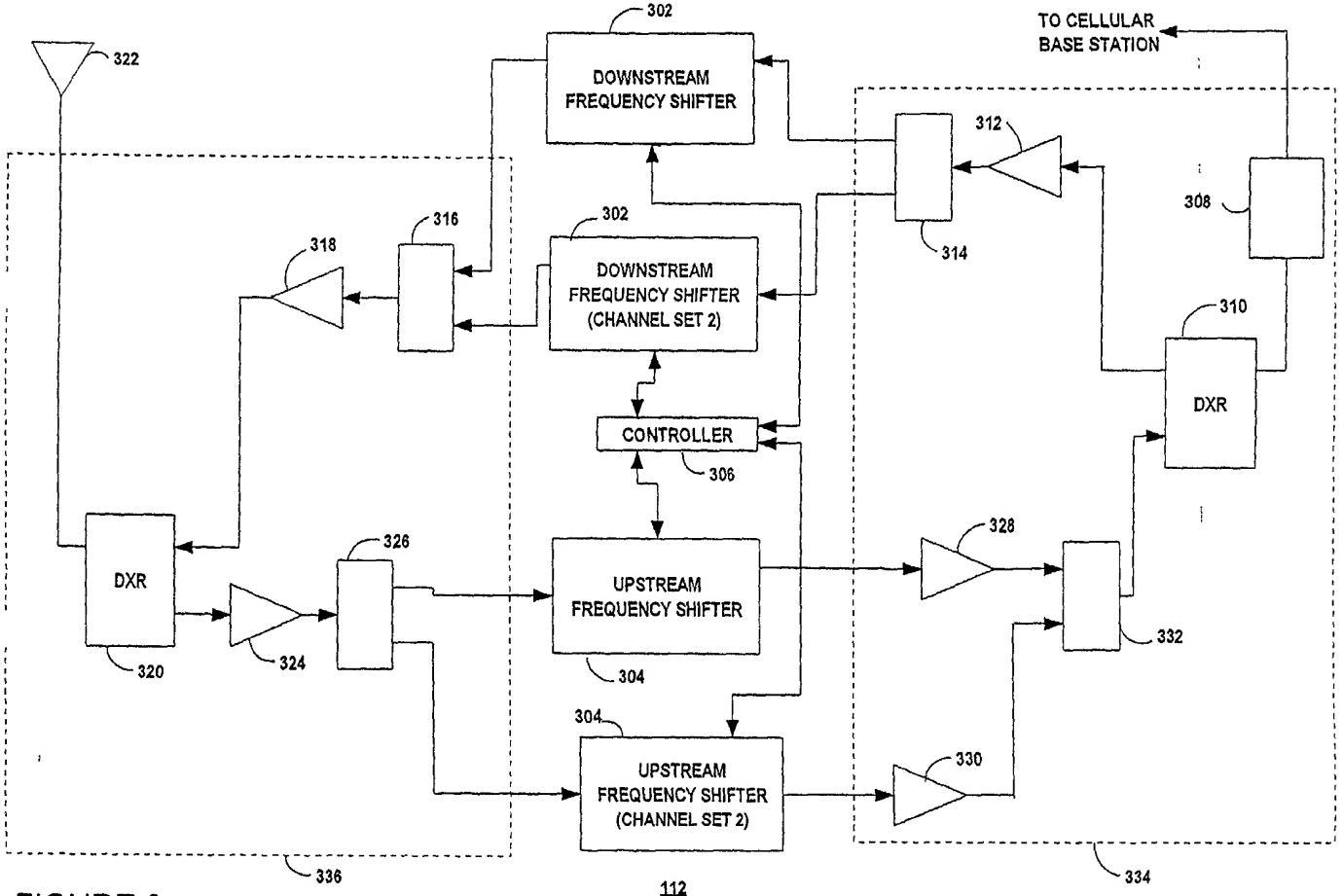
302
DOWNSTREAM FREQUENCY SHIFTER
TO CELLULAR BASE STATION
322
312
308
316
318
302
DOWNSTREAM FREQUENCY SHIFTER (CHANNEL SET 2)
314
310
DXR
CONTROLLER
306
DXR
326
328
UPSTREAM FREQUENCY SHIFTER
332
320
324
304
304
UPSTREAM FREQUENCY SHIFTER (CHANNEL SET 2)
330
336
112
334

FIGURE 3

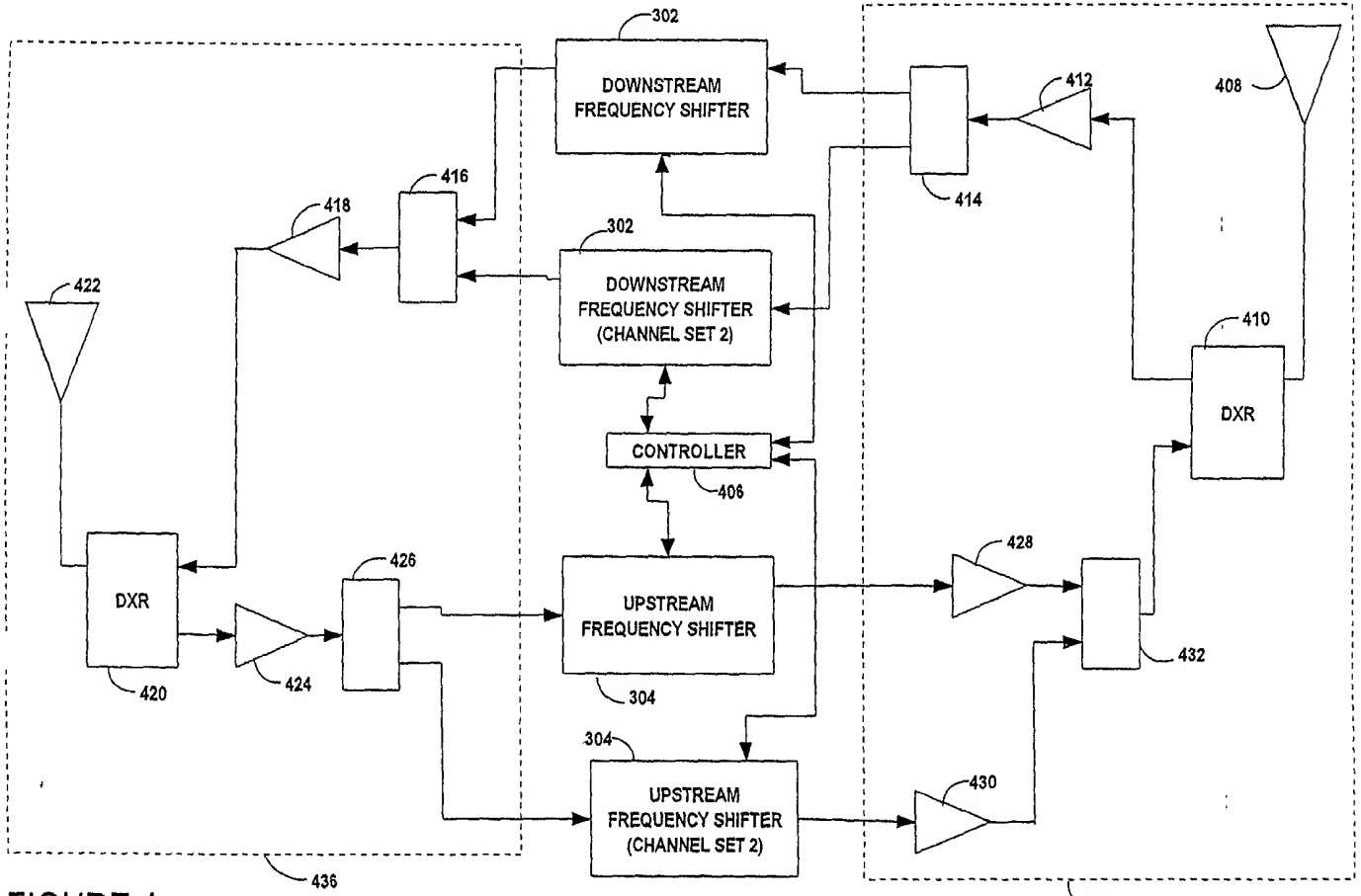
302
DOWNSTREAM FREQUENCY SHIFTER
412
408
414
416
418
302
DOWNSTREAM FREQUENCY SHIFTER (CHANNEL SET 2)
422
410
DXR
CONTROLLER
406
428
426
DXR
UPSTREAM FREQUENCY SHIFTER
432
420
424
304
304
UPSTREAM FREQUENCY SHIFTER (CHANNEL SET 2)
430
436
434
104

FIGURE 4

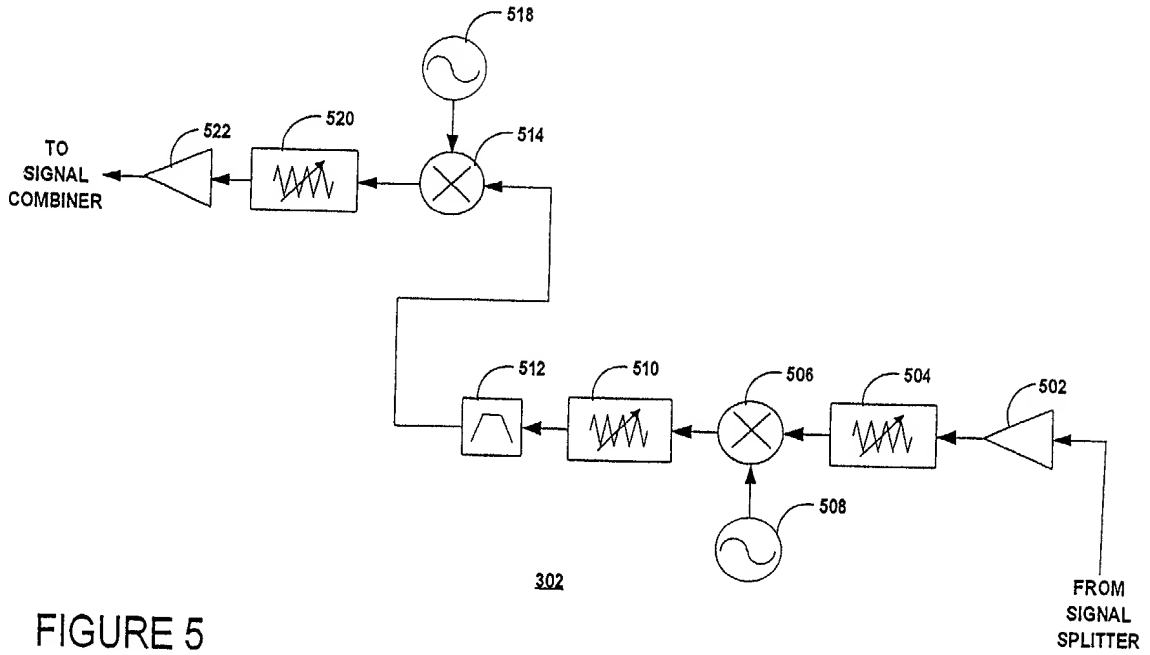
518
522
520
514
TO
SIGNAL
COMBINER
512
510
506
504
502
508
302
FROM
SIGNAL
SPLITTER

FIGURE 5

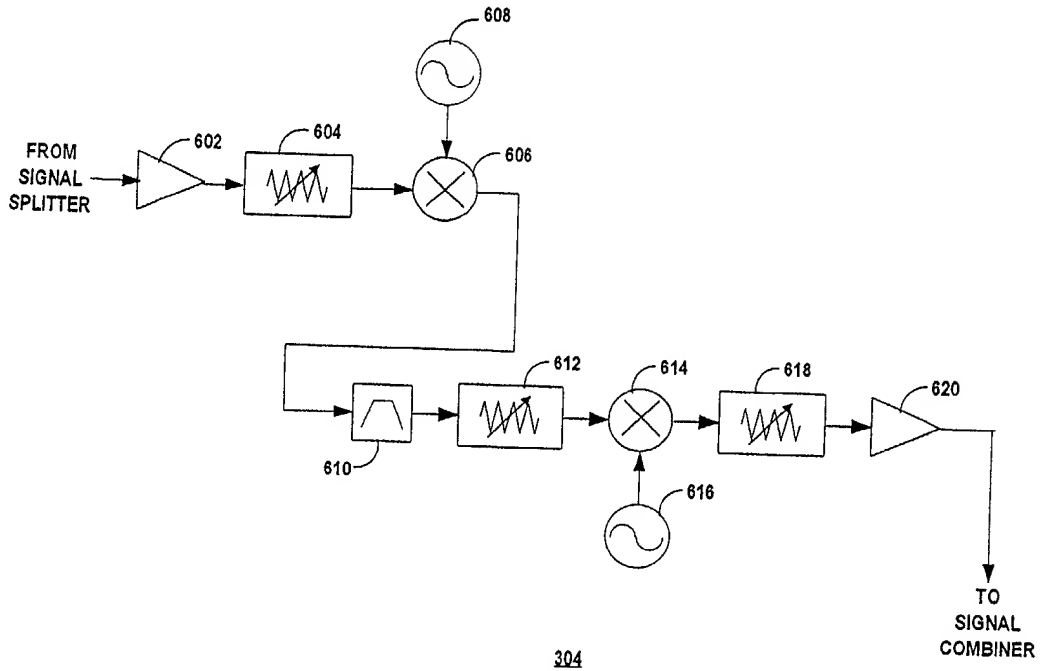
608
FROM
SIGNAL
SPLITTER
602
604
606
612
614
618
620
610
616
TO
SIGNAL
COMBINER
304

FIGURE 6

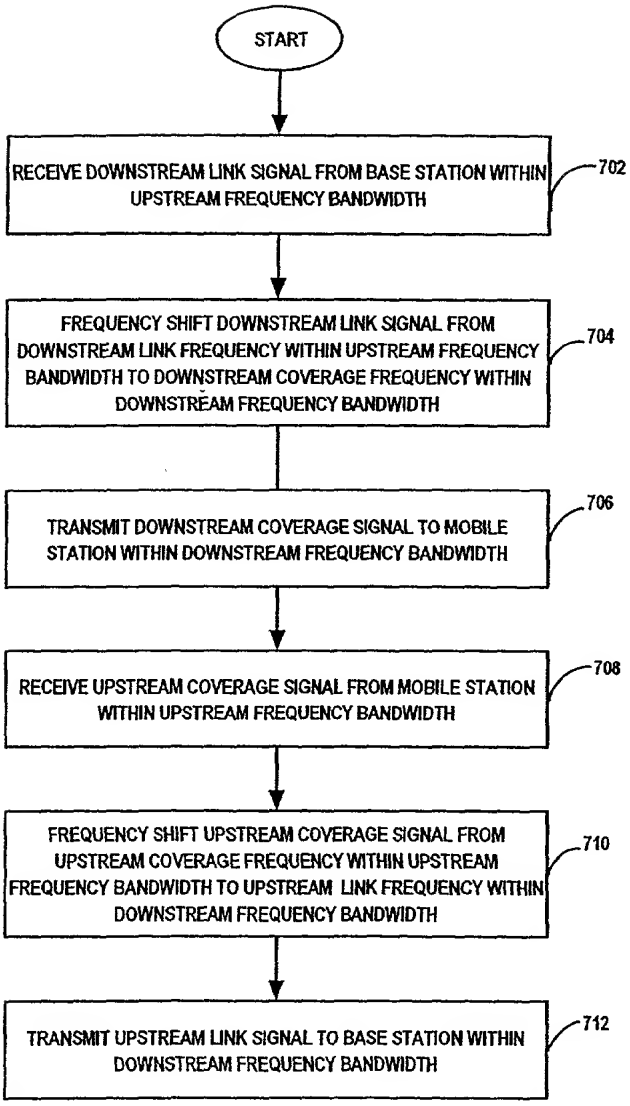
START
RECEIVE DOWNSTREAM LINK SIGNAL FROM BASE STATION WITHIN UPSTREAM FREQUENCY BANDWIDTH
702
FREQUENCY SHIFT DOWNSTREAM LINK SIGNAL FROM DOWNSTREAM LINK FREQUENCY WITHIN UPSTREAM FREQUENCY BANDWIDTH TO DOWNSTREAM COVERAGE FREQUENCY WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
704
TRANSMIT DOWNSTREAM COVERAGE SIGNAL TO MOBILE STATION WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
706
RECEIVE UPSTREAM COVERAGE SIGNAL FROM MOBILE STATION WITHIN UPSTREAM FREQUENCY BANDWIDTH
708
FREQUENCY SHIFT UPSTREAM COVERAGE SIGNAL FROM UPSTREAM COVERAGE FREQUENCY WITHIN UPSTREAM FREQUENCY BANDWIDTH TO UPSTREAM LINK FREQUENCY WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
710
TRANSMIT UPSTREAM LINK SIGNAL TO BASE STATION WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
712

FIGURE 7

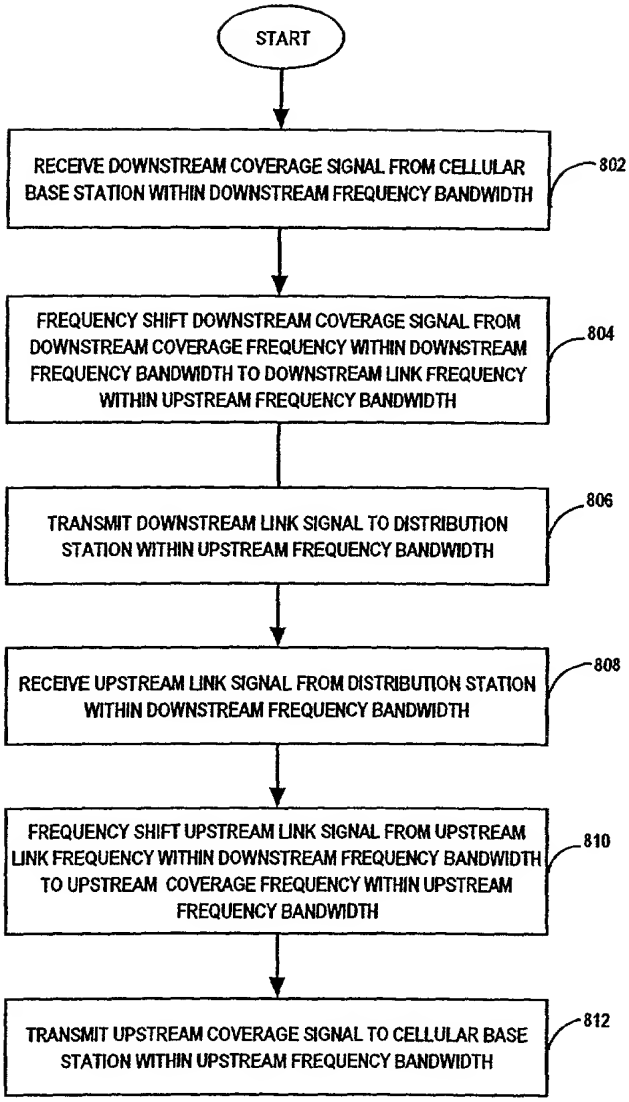
START
RECEIVE DOWNSTREAM COVERAGE SIGNAL FROM CELLULAR BASE STATION WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
802
FREQUENCY SHIFT DOWNSTREAM COVERAGE SIGNAL FROM DOWNSTREAM COVERAGE FREQUENCY WITHIN DOWNSTREAM FREQUENCY BANDWIDTH TO DOWNSTREAM LINK FREQUENCY WITHIN UPSTREAM FREQUENCY BANDWIDTH
804
TRANSMIT DOWNSTREAM LINK SIGNAL TO DISTRIBUTION STATION WITHIN UPSTREAM FREQUENCY BANDWIDTH
806
RECEIVE UPSTREAM LINK SIGNAL FROM DISTRIBUTION STATION WITHIN DOWNSTREAM FREQUENCY BANDWIDTH
808
FREQUENCY SHIFT UPSTREAM LINK SIGNAL FROM UPSTREAM LINK FREQUENCY WITHIN DOWNSTREAM FREQUENCY BANDWIDTH TO UPSTREAM COVERAGE FREQUENCY WITHIN UPSTREAM FREQUENCY BANDWIDTH
810
TRANSMIT UPSTREAM COVERAGE SIGNAL TO CELLULAR BASE STATION WITHIN UPSTREAM FREQUENCY BANDWIDTH
812

FIGURE 8